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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/670,751 | 09/25/2003 | Miguel Dajer | IDS 125676 67,108-018 | 2766 |
| 26096 | 7590 | 06/16/2006 | EXAMINER | |
| CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009 | | | STEIN, JAMES D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2874 | |

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,751

Applicant(s)

DAJER ET AL.

Examiner

James D. Stein

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/21/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-15 and 17-22 is/are rejected.
- 7) ☒ Claim(s) 9, 16 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/25/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This Office Action is responsive to the amendment filed on 03/21/06, which has been fully considered and entered. However, these arguments are essentially the same as those addressed in the previous Office Action, and are not persuasive. Claim 23 has been amended; claims 1-23 are pending in the application.

Response to Arguments

Applicant's arguments, filed 03/21/06 are not persuasive. *Popoff discloses all of the structure of the claimed invention except for a "radio"*. A radio is not necessarily required to accommodate RF signals, but rather may communicate using other electromagnetic frequency bands instead. A transceiver may be considered a radio.

Furthermore, even to the extent that a transceiver is not considered a radio, Popoff does not teach any specific communication frequency band to be used in the device. Thus, it is left up to an ordinarily skilled artisan to determine the communication frequency band. Applicant admits that tradition prior art wireless systems employ RF signals (page 1 lines 13-14). In this case, due to the widespread use and extremely well known nature and properties of RF signals in communications devices, and because Popoff could presumably accommodate RF signals, it would have been obvious at the time of the invention to one of ordinary skill in the art to ensure the transceivers 18 of Popoff were radio transceivers (communicating via RF signals) due to the widespread use and well-known properties of RF signals in communication systems.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 5-8, 10-15 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over [USPAT 4,943,136] to Popoff, and further in view of applicant's admitted prior art ("Description of the Related Art", specification, page 1, lines 8-18).

With regard to claim 1, fig. 1 of Popoff shows at least one transceiver 18 at a location remote from a backplane; and at least one communication link 12 coupling said at least one transceiver 24 to the backplane, wherein the communication link 12 carries signals between the backplane and said at least one transceiver 18 at the location remote from the backplane.

Therefore, Popoff discloses the claimed invention except for the transceiver 18 to be a radio. Since Popoff does not teach a specific frequency band of electromagnetic radiation to be used in the device, it is left up to an ordinarily skilled artisan to determine the communication frequency band. In the specification, applicant admits that RF signals (page 1 line 13) are traditionally used (page 1 line 8) in wireless communication systems (page 1 lines 8-14). Therefore, it would have been obvious at the time of the invention to ensure the transceivers 18 of Popoff were radio transceivers (communicating via RF signals) due to the widespread use and well-known properties of RF signals in communication systems.

With regard to claim 2, in addition to the rejection of claim 1 previously discussed above, said communication link 12 is taught by Popoff to be a fiber-optic cable (col. 1 line 21).

With regard to claims 3 and 4, in addition to the rejection of claim 1 previously discussed above, said backplane is shown by figs. 2 and 3 to further comprise a plurality of backplane cards 26 attached thereto in respective radio card slots 36/38 in the backplane.

With regard to claim 5, in addition to the rejection of claim 1 previously discussed above, fig. 1 shows a plurality of radio cards 10 respectively connected to the radio transceivers 18.

With regard to claim 6, in addition to the rejection of claim 5 previously discussed above, figs. 2 and 3 shows the plurality of backplane cards 26 respectively connected to the backplane and the plurality of communication links 12 respectively connected to the backplane cards 26. Fig. 1 shows the plurality of communication links 12 respectively connected to the radio cards 10 via connectors 13 (col. 4 lines 20-26).

With regard to claim 7, in addition to the rejection of claim 6 previously discussed above, Popoff disclose a plurality of radio cards 10. Furthermore, fig. 2 shows an embodiment wherein each backplane card 26 is connected to the plurality of radio cards 10 via communication link 12. This is due to the parallel nature of the connection between the radio cards and backplane cards (as opposed to the serially connected embodiment of Fig. 3 wherein each backplane card is connected to a single radio card).

With regard to claim 8, in addition to the rejection of claim 6 previously discussed above, figs. 1-3 show the device comprises a plurality of radio cards 10 connected to a plurality of backplane cards 26 via a plurality of communication links 12, the backplane cards 26 being attached to the backplane.

With regard to claim 10, figs. 2 and 3 show a backplane fiber card 26 having a backplane connector 40; fig. 1 shows a radio fiber card 10 having a radio connector 13; and at least one fiber link 12 connecting the backplane fiber card 26 and the radio fiber card 10.

With regard to claim 11, in addition to the rejection of claim 10 previously discussed above, Popoff in view of applicant's admitted prior art disclose the claimed invention except for

the backplane connector and the radio connector to have a standard configuration for connection to a backplane and a radio, respectively. It would have been obvious at the time of the invention to one of ordinary skill in the art to ensure the radio connector and the backplane connector each had a standard configuration for connection to a backplane and a radio, respectively, in order to facilitate interconnection of the radio and backplane.

With regard to claim 12, in addition to the rejection of claim 10 previously discussed above, the radio fiber card 10 and the backplane fiber card 26 each comprise an optical transceiver 18 connected to at least one fiber link 12 (col. 4 lines 23-26).

With regard to claim 13, in addition to the rejection of claim 10 previously discussed above, figs. 2 and 3 show the backplane fiber card comprises a plurality of fiber links 32. Fig. 1 shows each fiber link (collectively 12) is connected to a radio card 10 via connector 13.

With regard to claims 14, 15 and 17-20, the method of transmitting a signal between a backplane and a remote radio is inherent to the disclosure discussed above in the rejections of claims 1-4 and 5-8.

Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popoff/admitted prior art, and further in view of [USPAT 6,733,183] to Gregory, which discloses a dynamically configurable backplane. The claimed invention has been disclosed and previously discussed above except for a digital signal processing portion associated with the backplane. Fig. 1 of Gregory shows a digital signal processing portion (12, 14, 16, 18) associated with backplane 28. Gregory teaches that this arrangement facilitates processing all information signals within a single cabinet (abstract). Therefore, it would have been obvious at the time of

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the invention to include a digital signal processing portion associated with the backplane in order to include all signal processing within a single cabinet. It is noted applicant that the overall cabinet structure would comprise a “base station” as recited in the preamble of claim 21.

Allowable Subject Matter

Claims 9, 16 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With regard to claims 9 and 23, none of the cited prior art discloses or suggests the wireless communication backplane system as discussed above wherein the system comprising at least one non-remote radio, wherein said at least one non-remote radio is plugged into a first radio card slot in the backplane and said at least one backplane fiber card plugged into a second radio card slot in the backplane and connected to said at least one radio card via said at least one communication link; wherein the digital signal processing portion is at a first location and comprising at least one other radio having a radio card received by a radio card slot in the backplane such that the at least one other radio is at the first location.

Claim 16 drawn to a method of transmitting a signal between a backplane and a remote radio is inherent to the apparatus as limited by claims 9 and 23.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

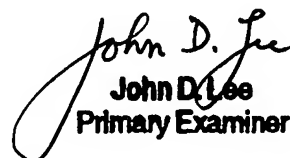
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D. Stein whose telephone number is (571) 272-2132. The examiner can normally be reached on M-F (8:00am-4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James D. Stein
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John D. Lee
Primary Examiner